

We should also send the encoding and decoding logic with the encoded bit string.

∴ We send the ascii codes of each character and their corresponding encoded ~~bit~~ Huffman bit values together.

$$\begin{aligned}\text{∴ Bits needed for ascii} &= 6 \times \text{characters} \times 8 \\ &= 48\end{aligned}$$

Also, the binary keys = no. of bits in (000,
001, 111, 10, 01, 110)
= 16

$$\begin{aligned}\text{∴ Total bits which would be sent for future reference} &= 48 + 16 = 64\end{aligned}$$

$$\begin{aligned}\text{∴ Total bits with string} &= 64 + 38 \\ &= \underline{\underline{102}}\end{aligned}$$